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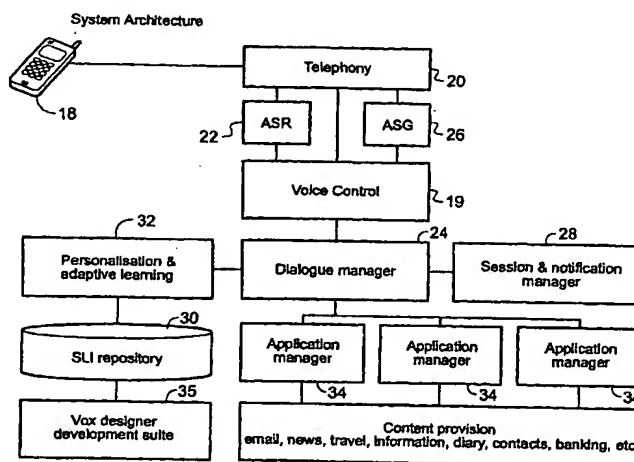
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GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
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[Continued on next page]

(54) Title: SPOKEN LANGUAGE INTERFACE



(57) Abstract: A spoken language interface comprises an automatic speech recognition system (22) and a text to speech system (26) controlled by a voice controller (19). The ASR and TTS are connected to a telephony system which receives user speech via a communications link. A dialogue manager (24) is connected to the voice controller and provides control of dialogue generated in response to user speech. The dialogue manager is connected to application managers (34) each of which provide an interface to an application with which the user can converse. Dialogue and grammars are stored in a database (30) as data and are retrieved under the control of the dialogue manager and a personalisation and adaptive learning module (32). A session and notification manager (28) records session details and enables re-connection of a broken conversation at the point at which the conversation was broken.

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Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR,  
GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent  
(BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,  
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## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/GB 02/00878

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G10L15/22 G10L15/18 G10L13/04 G06F17/60

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G10L G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, INSPEC

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 00 21074 A (LERNOUT & HAUSPIE SPEECHPROD) 13 Apr11 2000 (2000-04-13)	1-3, 5-12, 14, 15, 17, 18, 20, 27-32, 35-37, 39, 47, 49, 53-59, 71-73
Y	abstract; figures 2A-B, 7  page 16, line 13-17	4, 13, 16, 19, 43, 44, 50-52, 60-68
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search

9 September 2002

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## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/GB 02/00878

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	LAMEL L ET AL: "THE LIMSI ARISE SYSTEM FOR TRAIN TRAVEL INFORMATION" 1999 IEEE INTERNATIONAL CONFERENCE ON ACOUSTICS, SPEECH, AND SIGNAL PROCESSING. PHOENIX, AZ, MARCH 15 - 19, 1999, IEEE INTERNATIONAL CONFERENCE ON ACOUSTICS, SPEECH, AND SIGNAL PROCESSING (ICASSP), NEW YORK, NY: IEEE, US, vol. 1, 15 March 1999 (1999-03-15), pages 501-504, XP000900167 ISBN: 0-7803-5042-1 abstract	13,16, 19,63-68
X	US 6 173 266 B1 (MARX ET AL) 9 January 2001 (2001-01-09)  abstract; figures 4,5,7,8,13,16 column 14, line 47 -column 15, line 12	21-26, 33,34, 74-76
X	US 5 651 096 A (PALLAKOFF G ET AL) 22 July 1997 (1997-07-22)  abstract; figure 2	1,12,15, 18,35, 58,60, 63,71
X	US 6 330 539 B1 (TAKAYAMA ET AL) 11 December 2001 (2001-12-11)  abstract; figure 4 & JP 11 224179 A 17 August 1999 (1999-08-17)	1,12,15, 18,35, 58,60, 63,71
Y	WO 00 14727 A (WEBER DEAN C ;ONE VOICE TECHNOLOGIES INC (US)) 16 March 2000 (2000-03-16) abstract page 5, line 21-28	4,43,44
Y	SCHULZRINNE H ET AL: "THE SESSION INITIATION PROTOCOL: INTERNET-CENTRIC SIGNALING" IEEE COMMUNICATIONS MAGAZINE, IEEE SERVICE CENTER. PISCATAWAY, N.J, US, vol. 38, no. 10, October 2000 (2000-10), pages 134-141, XP000969736 ISSN: 0163-6804 abstract	52
Y	EP 0 938 068 A (AT & T CORP ;NAVAL RESEARCH LAB (US)) 25 August 1999 (1999-08-25) abstract; figure 4 paragraphs '0036!', '0049!	50,51, 60-62
	-/-	

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/GB 02/00878

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>BARGA R S ET AL: "Persistent client-server database sessions" ADVANCES IN DATABASE TECHNOLOGY - EDBT 2000. 7TH INTERNATIONAL CONFERENCE ON EXTENDING DATABASE TECHNOLOGY. PROCEEDINGS (LECTURE NOTES IN COMPUTER SCIENCE VOL.1777), 2000, pages 462-477, XP002212807 Berlin, Germany, Springer-Verlag, Germany ISBN: 3-540-67227-3 abstract</p>	<p>50, 51, 60-62</p>

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/GB 02/00878

### Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☒ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:  
4, 43-45, 50-52, 60-62
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-3,5-20,27-32,35-37,39,47-49,53-59,63-68,71-73

speech dialogue interface for command and control

- 1.1. Claims: 21-26,33-34,74-76

speech dialogue interface development tool

2. Claims: 4,43-45

adaptation of the dialogue manager to the user

3. Claims: 38,69

determining the user's position or demographics for dialogue mode selection

4. Claim : 46

ability to update the system while in use

5. Claims: 40-42

use of data in grammar independent form

6. Claims: 50,51,60-62

use of a session manager, allows to recover a previous dialogue state after deconnexion.

7. Claim : 52

use of a notification manager

8. Claim : 70

selective advertizing

Please note that all inventions mentioned under item 1, although not necessarily linked by a common inventive concept, could be searched without effort justifying an additional fee.

**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

International Application No  
**PCT/GB 02/00878**

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